Ga., near by. The smallest amount was 0.57 inch at Chapel Hill, N. C.

The record of excessive precipitation for the month is not important, although amounts exceeding 2.50 inches in 24 hours occurred in all States, generally on irregular dates. In Florida 24-hourly amounts ranging from 2 to over 6 inches fell at 10 stations on the 15th, 16th, or 17th. The maximum heavy rainfall was 7 inches at St. Marys in southeastern Georgia on the 15th; next comes the fall of 6.90 inches at Fernandina, Fla., on the 16th, and then 5.30 inches at Tryon, N. C., on the 5th.

MISCELLANEOUS PHENOMENA.

The number of clear days for the district averaged 12, partly cloudy days 12, cloudy days 7, and days with appreciable rainfall 11. There was considerably less sunshine than usual during the midsummer month. The wind movement as usual was light; only two stations reported maximum winds of 40 miles an hour or over, namely, Pensacola 40 miles from the south on the 21st and Savannah 49 miles from the southeast on the 15th. The latter storm is described below. The prevailing winds were south or southeast in the Gulf States and southwest over the Carolinas and Virginia.

Many local thunderstorms occurred during the month, mostly of a mild character, but quite an exceptional amount of damage by lightning was reported during the month, chiefly in Mississippi, Alabama, and Georgia. During a thunderstorm at Anniston, Ala., where the members of the Alabama Militia were in camp, lightning struck the mess tent of Company B, Second Regiment, instantly killing Charles Kirby and fatally injuring Herbert Pate. Fifteen other soldiers were slightly injured.

At Savannah, Ga., thunderstorms occurred on nine days and were of marked violence on the 11th, 12th, and 24th. On the 11th lightning struck a tree on the county farm about 2 miles from the station under which a gang of convicts with their overseer had sought shelter. Frightened by this they moved into an open field; a second electric discharge followed, killing one of the convicts and stunning the overseer and others. The most violent electrical storm for the month occurred on the 24th. The power house and several other buildings were struck by lightning and the street-car service in the city was crippled for several days.

THE STORM OF JULY 14TH-15TH, 1912.

The following report on the storm near the Georgia coast is taken from notes furnished by Mr. C. J. Doherty, local forecaster, in charge at Savannah, Ga.:

A decided fall in the barometer took place on the 14th, with increasing winds. The regular p. m. reports showed an incipient disturbance near the Georgia coast, and high winds with unusually rough seas prevailed at Tybee Beach during the night. The morning reports of the 15th indicated that the storm had increased slightly in intensity. The weather was thick and threatening, with light intermittent showers which continued during the day and night. After midnight the wind became fresh and gusty. A verifying velocity was first attained at 7.35 a. m. of 36 miles an hour, and thereafter the wind continued high until 10 p. m., with a maximum velocity of 49 miles from the southeast shortly after 11 a. m. on the 15th. During the day the displayman at Tybee reported unusually wild seas, with high winds and swell from the southeast. Northeast storm warnings were displayed from Jacksonville to Charleston. No material damage was reported.

RIVER CONDITIONS.

Very nearly normal river conditions prevailed throughout the district during July. The flood stage was slightly exceeded in the Ocmulgee River at Abbeville, Ga., from the 18th to the 25th, without any damage, and the Pearl River rose to within a tenth of a foot of flood stage at Jackson, Miss., on the 26th. At the close of the month the rivers had generally attained the lowest stages. At a few places, however, the mean river stages for the month were very high. The mean stage of the Savannah River at Augusta, Ga., was 14.5 feet as compared with a normal July stage of 8.1 feet, and is the highest average on record for the month. The highest previous average stages for July were 13.3 feet in 1906, 12.2 feet in 1910, and 12.9 feet in 1881.

THE RICHMOND TORNADO OF MAY 12, 1912.

By JAMES H. KIMBALL, Observer.

Shortly after noon of Sunday, May 12, 1912, the first tornado ever known to have occurred in the vicinity of Richmond was observed by a large number of people. Fortunately no dwellings stood in the path of the storm and no one was injured, but several small structures were demolished and hundreds of trees were blown down. The storm was seen in its incipient stages as it approached from the southwest by a large number of residents of Forest Hill. It appeared as a low, dense, rapidly moving cloud as it crossed the James River, but it did not assume destructive proportions until it neared the western extension of Broad Street. After crossing Broad Street the storm became more violent and throughout the next half mile of its course which lay through a thick growth of pine, it swept close to the ground and destroyed many large trees. The direction of the storm was northeasterly, but the trees that fell were in most cases blown toward some point between northwest and west. A few fell toward the north and one of these was found lying under another that was blown toward the west. The underlying tree is small, not over 8 inches in diameter, but the one above is nearly three times as thick. These trees grew but a few feet apart, but, while the under one seems simply to have been blown over, the one above though perfectly sound was twisted through a positive angle of 180° before it fell. The break occurred about 2 feet above the ground.

Emerging from this wood as a perfectly formed tornado having the characteristic funnel-shaped cloud, the storm crossed the southeast corner of the lawn fronting the residence of Mr. J. D. Carneal. Here an enormous oak was divested of nearly all of its foliage and also of 10 large branches that were twisted off at a uniform height of about 30 feet above the ground. A little farther a windmill and water tank were destroyed and part of the débris carried northward nearly 2 miles. Beyond the Carneal property the storm crossed an open and slightly depressed piece of land at the lowest point of which it unroofed a couple of freight cars standing on the Richmond, Fredericksburg & Potomac track. An open field was then crossed after which the storm entered a thick growth of pine and oak trees through which it cut a path about 100 yards wide. Leaving the wood the storm crossed another open field and then entered the grove of oak, pine, and hickory that adjoins Young's Pond on the south. Here the path spread out to an extreme width of about 1,500 feet. On the north side of the pond a few trees were blown down while on the south side nearly 100 were felled. Beyond the pond the country is open and no traces of destruction were found, so that it is thought the storm was dissipated within a few hundred yards at most of the pond.

* * * * *

The testimony of several eyewitnesses in connection with a careful examination of the storms' track from end to end, leads to the conclusion that a true tornado had occurred. There is the direct statement of several persons attesting the presence of a funnel-shaped cloud; débris was seen flying high in the air over nearly calm surface conditions indicating strong vertical currents in the neighborhood. Trees and branches were twisted off showing rotary winds, and hail in the form of clear broken fragments all indicate gyratory air currents of great violence. However, the descending visible vortex occurred but twice, lasting each time but a few seconds and must be considered to be an incidental feature occurring within a great mass of air that swept straight ahead at a rate of speed sufficient to prostrate the trees that stood in its path. * * *